

Title (en)
TEMPERATURE-RESISTANT SILICONE RESINS

Title (de)
TEMPERATURBESTÄNDIGE SILIKONHARZE

Title (fr)
RESINES DE SILICONE RESISTANTES A LA TEMPERATURE

Publication
EP 2966115 A2 20160113 (EN)

Application
EP 15173795 A 20150625

Priority
US 201414329884 A 20140711

Abstract (en)
A modified silicone resins of Formula (II) and an elastomer formulation comprising such a modified silicone resins of Formula (II) are presented. Formula (II) comprises at least one of each of the following subunits: and The R 1 , R 2 , R 3 , R 6 , R 7 , R 8 , R 9 , R 10 , R 11 , R 12 and R 13 are each independently selected from a group consisting of H, alkyl, alkenyl, alkynyl, and aryl. The X is selected from a group consisting of arylene, transition metal, inorganic oxide, and silsesquioxane. The values of t ranges from 1 to 10, y ranges from 1 to 200 and z ranges from 1 to 1,000. The elastomeric materials prepared from modified silicone resins display robust mechanical properties following prolonged exposure to high temperatures (e.g., 316°C or higher).

IPC 8 full level
C08G 77/52 (2006.01); **C08G 77/42** (2006.01); **C08G 77/56** (2006.01); **C08G 77/58** (2006.01); **C08L 83/10** (2006.01); **C08L 83/14** (2006.01)

CPC (source: EP US)
C08G 77/04 (2013.01 - US); **C08G 77/42** (2013.01 - EP US); **C08G 77/44** (2013.01 - EP US); **C08G 77/442** (2013.01 - US);
C08G 77/48 (2013.01 - EP US); **C08G 77/52** (2013.01 - EP US); **C08G 77/56** (2013.01 - EP US); **C08G 77/58** (2013.01 - EP US);
C08G 77/80 (2013.01 - EP US); **C08K 3/22** (2013.01 - EP US); **C08K 5/54** (2013.01 - EP US); **C08K 5/5415** (2013.01 - US);
C08K 5/57 (2013.01 - EP US); **C08L 83/10** (2013.01 - EP US); **C08L 83/14** (2013.01 - EP US); **C08K 2003/2241** (2013.01 - US);
C08K 2003/2265 (2013.01 - EP US); **C08K 2003/2272** (2013.01 - US)

C-Set (source: EP US)

EP
1. **C08K 3/22 + C08L 83/10**
2. **C08K 5/57 + C08L 83/10**
3. **C08K 5/54 + C08L 83/10**
4. **C08K 5/54 + C08L 83/14**
5. **C08K 3/22 + C08L 83/14**
US
1. **C08L 83/10 + C08K 3/22**
2. **C08L 83/10 + C08K 5/57**
3. **C08L 83/10 + C08K 5/54**
4. **C08L 83/14 + C08K 5/54**
5. **C08L 83/14 + C08K 3/22**
6. **C08K 3/22 + C08L 83/10**
7. **C08K 5/57 + C08L 83/10**
8. **C08K 5/54 + C08L 83/10**
9. **C08K 5/54 + C08L 83/14**
10. **C08K 3/22 + C08L 83/14**

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• U. LAUTER ET AL.: "Vinyl-Substituted Silphenylene Siloxane Copolymers: Novel High-Temperature Elastomers", MACROMOLECULES, vol. 32, 1999, pages 3426 - 3431
• C.L. HOMRIGHAUSEN; T.M. KELLER: "High-Temperature Elastomers from Silarylene-Siloxane- Diacetylene Linear Polymers", J. POLYM. SCI. PART A: POLYM. CHEM., vol. 40, 2002, pages 88 - 94

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Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

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EP 2966115 A2 20160113; **EP 2966115 A3 20160224**; **EP 2966115 B1 20240124**; CA 2896111 A1 20160111; CA 2896111 C 20200825; CN 105273197 A 20160127; CN 105273197 B 20210316; EP 3269756 A1 20180117; EP 3269756 B1 20240911; JP 2016029144 A 20160303; JP 2019163481 A 20190926; JP 2021193185 A 20211223; JP 6619161 B2 20191211; JP 7386831 B2 20231127; US 10189953 B2 20190129; US 2016009864 A1 20160114; US 2017101510 A1 20170413; US 9534089 B2 20170103

DOCDB simple family (application)
EP 15173795 A 20150625; CA 2896111 A 20150702; CN 201510406105 A 20150710; EP 17184941 A 20150625; JP 2015117245 A 20150610; JP 2019097677 A 20190524; JP 2021138058 A 20210826; US 201414329884 A 20140711; US 201615389084 A 20161222